Setting and operating a failsafe

I've put this together as a result of the recent implementation of a new CAA ruling on failsafe systems.

If a radio system is fitted with a failsafe, regardless of aircraft type, size or weight, the failsafe must be used.

All 2.4ghz radio systems are fitted with failsafe of some sort and many 35mhz receivers have failsafe systems enabled which should be set according to manufacturers guidelines.

Models weighing more than 7kg must have a failsafe fitted regardless of the radio system used.

This means that you must have a functioning failsafe if the option is available and if the model weighs more than 7kg.

Described below is the method of setting a failsafe system using a Spektrum radio. Other makes of radio may have different method of setup, however the requirements still apply. You should consult your owner's manual or a fellow club member if you are unsure.

The basic purpose of a failsafe is to ensure that when a signal is lost, the aircraft slows, thus reducing any potential impact speed. In reality, failsafe operation is very rare and if it does occur it is usually only for a brief second.
It is important to remember that a failsafe will only work if the battery is connected and is in operation, as the receiver requires power to activate.

Setting up a failsafe using Spektrum radio

Unfortunately there appears to be no consistency between different models of Spektrum receiver. Some will only operate the throttle when the failsafe is activated and others will move both the throttle and the control surfaces to a pre-determined position. You should check the instructions accompanying your receiver to see what type of failsafe system it has.

Setting up Spektrum Receivers with the **throttle only** failsafe system

When binding the RX to the TX the position of the throttle at the time of binding will establish the throttle only failsafe position, therefore it is important that you set the throttle to **idle when binding the RX to the TX.**

Extract from Spektrum:

With SmartSafe, when signal is lost the throttle channel only is driven to its preset failsafe position (normally low throttle) while all other channels hold last command.

• Prevents unintentional electric motor response on start-up.

• Eliminates the possibility of over-driving servos on start-up by storing preset failsafe positions.

• Establishes low-throttle failsafe and maintains last-commanded control surface position if the RF signal is lost.

Setting up Spektrum Recievers with a **Preset** Failsafe system

If the signal is lost, all channels are driven to their failsafe position set during binding.

How To Program

1. Insert the bind plug and power on the receiver.

2. When the receiver LEDs blink, indicating bind mode, remove bind plug before binding the transmitter to the receiver.

3. LED lights will continue to blink.

4. Move transmitter's control sticks and switches to the desired Preset Failsafe positions, then turn it on in bind mode. (This should be neutral control surfaces and engine idle)

5. The system should connect in less than 15 seconds.

Whichever system you are using, the failsafe will need to be set, where possible, to the 'preset' control method, rather than the factory default method of 'hold'.

Preset, means that using the transmitter and following the manufacturer's instructions, you ensure the flight controls are set to neutral, and the throttle is set to idle if the failsafe is activated.
If 'hold' is used, all settings will remain in the same position they were when the signal was lost.

Testing the throttle only failsafe system

With the model restrained on the ground, set the engine/motor running at full power switch the TX off. If electric, the motor should stop, if IC the engine should go to idle.

Testing the Preset failsafe system

With the model restrained on the ground, set the motor/engine to full power and hold the rudder/elevator/aileron to full deflection and switch off the TX. If IC the engine will go to idle, if electric the motor will stop and the control surfaces will go to neutral.

All transmitters should be CE approved and should display the official CE mark.

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